

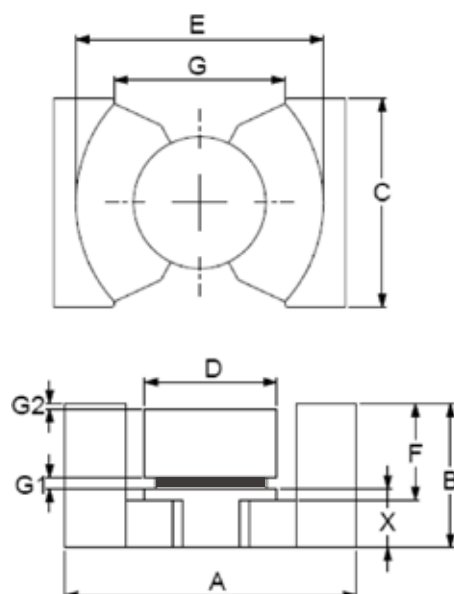
Multi-gap Ferrite Core

P6 I PQH50/50

2026/Jul. Version 1.0

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Multi-gap Ferrite Core



Core dimensions:

A	50.00 ± 0.70
B	25.00 ± 0.20
C	32.00 ± 0.60
D	20.00 ± 0.35
E	44.00 ± 0.70
F	18.00 ± 0.20
G	32.50 ± 0.70
X	9.30 ± 0.20

Application Fields:

1.

OBC

2.

DC/DC Converter

3.

Solar Inverter

4.

UPS

5.

Industrial SMPS

6.

Telecom/Server SMPS

Characteristics:

$\Sigma L/A$	L_e	A_e	A_{min}	V_e	W_t/set
0.361 mm ⁻¹	118.4 mm	328.3 mm ²	310.9 mm ²	38860 mm ³	200 g

Material	Part no.	G1 (mm)	G2 (mm)	Inductance Factor A_L (nH/N ²)
P6I	P6IPQH50/50G236	0.40	0.20	236 ±10%
	P6IPQH50/50G155	0.60	0.30	155 ±10%
	P6IPQH50/50G112	1.00	0.50	112 ±10%

Custom A_L values, air gaps, and materials are available upon request.

High Frequency/Low Loss Material

P6I

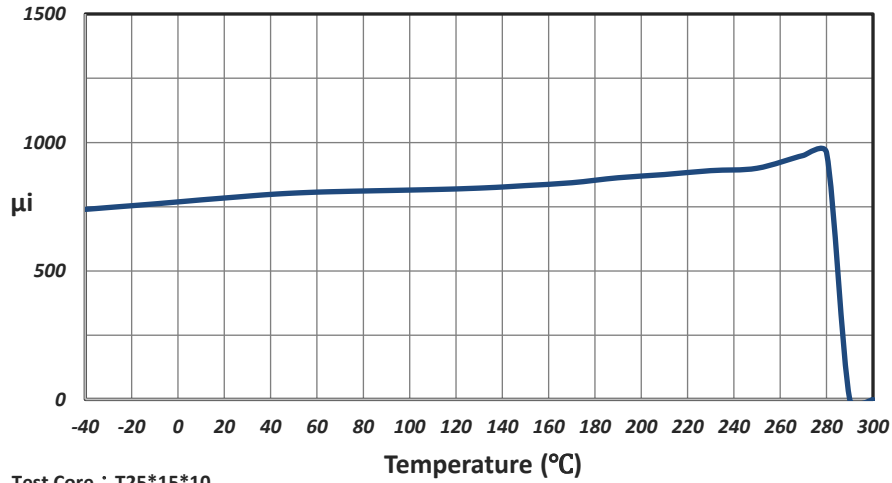
Material properties:

	Symbol	Unit	Measuring Conditions			P6I
			Freq.	Flux den.	Temp.	
Initial Permeability	μ_i		$\leq 10\text{kHz}$	0.25mT	25°C	900 $\pm 25\%$
Amplitude Permeability	μ_a		25kHz	200mT	25°C	> 1700
					100°C	> 1800
Power Loss	Pv	kW/m ³	1MHz	50mT	25°C	250
					100°C	110
			3MHz	10mT	25°C	50
					100°C	50
			3MHz	30mT	25°C	450
					100°C	370
			5MHz	9mT	25°C	150
					100°C	170
Saturation Flux Density	Bs	mT	10kHz	1200A/m	25°C	515
					100°C	430
Remanence	Br	mT	10kHz	1200A/m	25°C	200
					100°C	135
Coercivity	Hc	A/m	10kHz	1200A/m	25°C	50
					100°C	40
Hysteresis Material Constant	η_B	10 ⁻⁶ /mT	10kHz	1.5-3.0mT	25°C	< 1
Disaccommodation Factor	D _F	10 ⁻⁶	10kHz	< 0.25mT	25°C	< 2
Curie Temperature	T _c	°C				≥ 280
Resistivity	ρ	Ωm				10.00
Density	d	g/cm ³				4.80

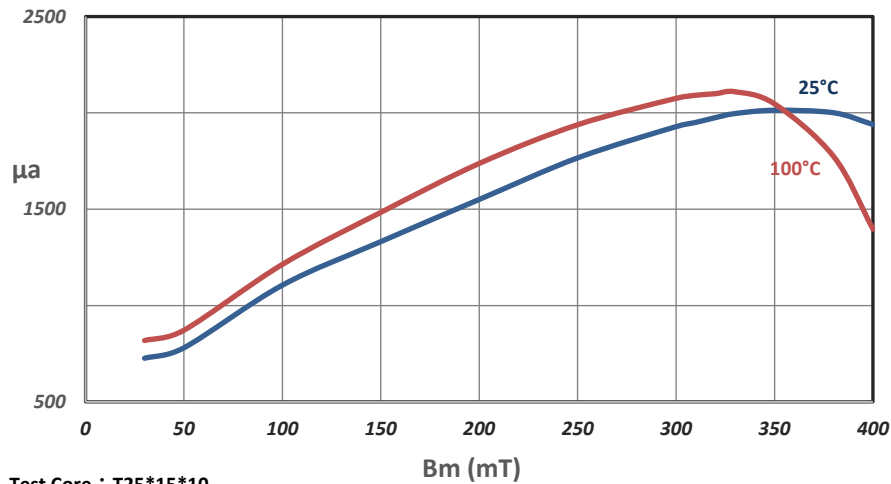
High Frequency/Low Loss Material

P6I

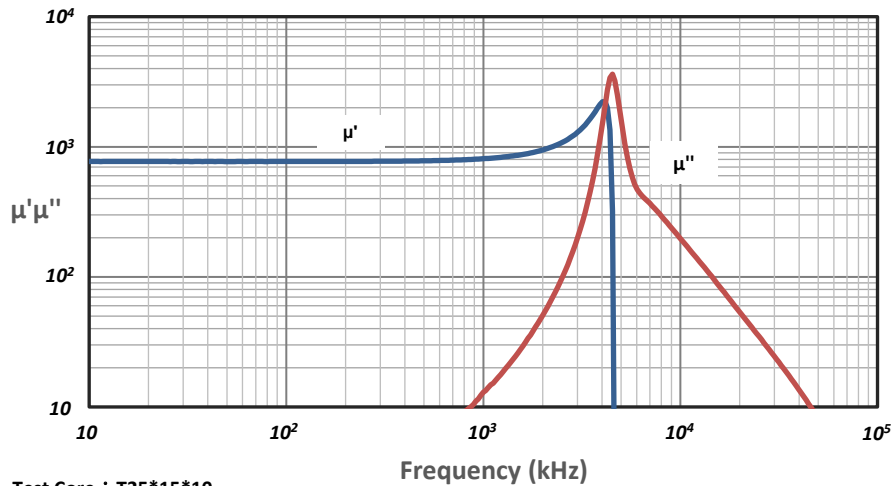
Initial Permeability vs Temperature



Amplitude Permeability vs Flux Density (B_m)



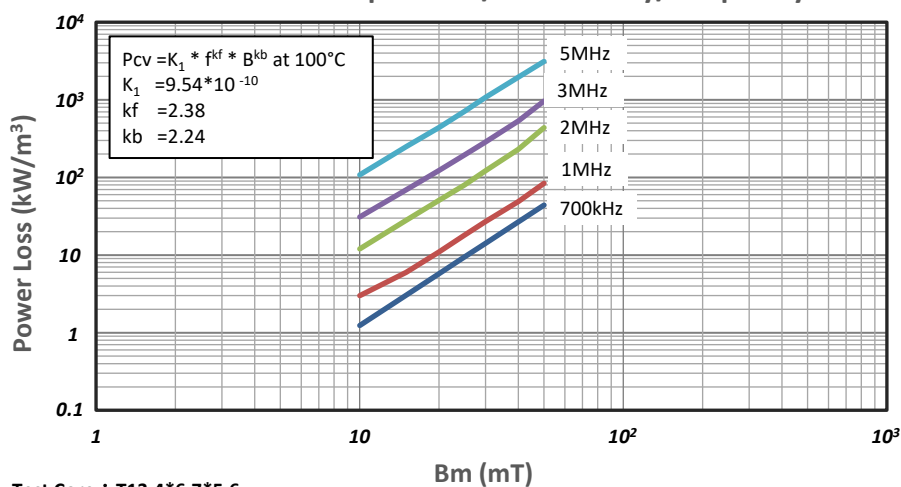
Complex Permeability vs Frequency



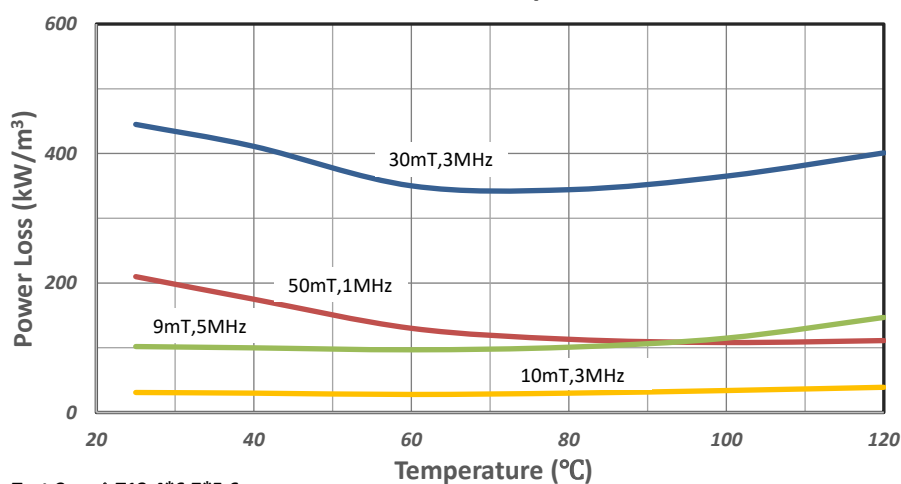
High Frequency/Low Loss Material

P6I

Power Loss vs Temperature/Flux Density/Frequency



Power Loss vs Temperature



Saturation Flux Density vs Magnetic Field

